A novel approach to improve the care model for patients with congenital heart disease in the Neonatal Intensive Care Unit (NICU)

Elizabeth M. Moynihan, MSN, CPNP-AC; Annie K. Grace, DNP, CPNP-AC; Ian W. Hovis, MD; John T. Berger, MD; Yuliyah A. Domnina, MD; Jenhao Jacob Cheng, PhD, MS, PStat; Janet Kreutzer, MSN, RN; Ashraf S. Harahsheh, MD

Children's National

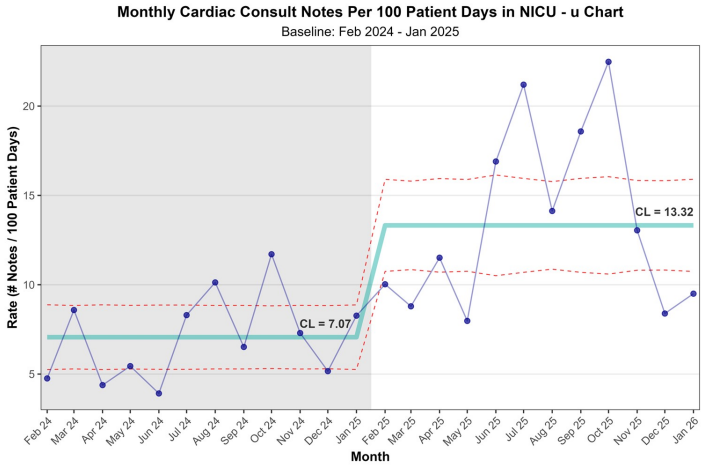
INTRODUCTION

- There are 41 Level IV NICUs in the United States that contribute to the Children's Hospital Neonatal Consortium and provide care for infants with congenital heart disease (CHD).
- Advanced practice provider (APP) involvement in the care of cardiac patients has been associated with reduced length of stay (LOS) across PAC[3] centers.
- At our institution due to overflow from a high cardiac intensive care unit (CICU) census and an increase in premature and low birth weight neonates with CHD, pre-operative and post-operative cardiac patients required care in our NICU.
- To meet this increased demand, two dedicated cardiac APPs were placed on the cardiology consult service to enhance daily interactions with the NICU and improve patient care.

The aim of this quality improvement initiative was to assess the impact of the new NICU cardiology consult team on improving daily evaluations, measured by number of cardiology consult notes; assess the impact on patient care, measured by hospital LOS and NICU to CICU bounce backs within 48 hours.

METHODS

- In February of 2025, the first APP started on the cardiology consult service primarily to improve the care delivery of cardiac patients in the NICU.
- The cardiology consult service also implemented other strategies which included: a consistent rounding time each day in the NICU, protocol sharing between teams, standardization of consultation note writing with lesion specific recommendations, and targeted cardiac education for NICU staff.
- We tracked number of daily cardiology consult notes and hospital LOS from the electronic medical record and number of NICU to CICU bounce backs from PC[4] data.



IUM: Inpatient cardiology unit meeting

RESULTS

- The number of monthly cardiac consult notes per 100 patient days in NICU increased from 7 to 13 with a central line shift (Figure 1).
- The number of patients who required transfer back to the CICU within 48 hours decreased from 5% to 2.7% post intervention.
- For patients in the NICU on the cardiology consult service, the median hospital length of stay (in days) decreased from 32 (14-77) to 20.5 (8-48.2), p <0.01 post implementation.

No Disclosures.

For questions, please contact:
Elizabeth Moynihan at EMoyniha@childrensnational.org

CONCLUSIONS

- We have improved access to cardiology services as demonstrated by an increase in cardiology consult note documentation.
- NICU patients followed by the new cardiology care team had a reduction in overall hospital LOS and were less likely to require transfer back to the CICU within 48 hours.
- We believe that this new APP role on the cardiology consult team has improved quality and continuity of care and enhanced teaching and collaboration.
- Our next steps include assessing NICU, CICU, and cardiology staff satisfaction with the new care model.